

ATTY DOCKET NO.
133474

DOC. ID
133474C

Ferrigno et al. does disclose angled beams but it begs the question, with respect to what are the beams angled?. Nothing in either Dulaney or Ferrigno et al. teach that the use of angled beams to laser shock peen "a non-laser shock peened area of the article with at least one first low fluence oblique laser beam that is oblique with respect to the surface.". Nothing in either Dulaney or Ferrigno et al. teaches the use of a low fluence oblique laser beam that is oblique with respect to the surface. Nothing in the Examiner's rejection even discusses a low fluence oblique laser beam that is oblique with respect to the surface. The only suggestion to do so is found in the present Application.

The Examiner's reasoning that "In this case, both references pertain to directing laser beams to different areas on a workpiece in a laser peening environment." is totally incorrect and has no bearing on the subject matter of the invention. Dulaney clearly teaches laser shock peening a single area and the boundary region of that area with a lower fluence. The boundary region is contiguous with the rest of the single area. Ferrigno et al. teaches laser shock peening of a single contiguous area with the same fluence. The different areas being laser shock peened in Ferrigno et al. are not contiguous.

Furthermore, nothing in Ferrigno et al. teaches using an oblique laser beam to achieve laser shock peening with a lower fluence. Nothing, in fact quite to the contrary, Ferrigno et al. discloses substituting an oblique beam for a normal beam and one skilled in the art would obviously use an oblique beam with the same fluence as the normal beam to achieve the desired degree or strength of compressive residual stresses. The Examiner's contention that "The use of angled beams in the Dulaney peening process would have been obvious at the time applicant's invention was made to a person having ordinary skill in the art because it provides a method of transitioning from the deeply peened area to the peripheral area." is totally without basis in the prior art. None of the

ATTY DOCKET NO.
133474

DOC. ID
133474C

references cited by the Examiner teach using an oblique beam to produce a lower fluence beam at the surface.

The Applicants refer the Examiner to the MPEP 706.02(j) "Contents of a 35 U.S.C. 103 Rejection - 700 Examination of Applications" 706.02(j) Contents of a 35 U.S.C. 103 Rejection 35 U.S.C. 103 authorizes a rejection where, to meet the claim, it is necessary to modify a single reference or to combine it with one or more other references. After indicating that the rejection is under 35 U.S.C. 103, the Examiner should set forth in the Office Action:

(A) the relevant teachings of the prior art relied upon, preferably with reference to the relevant column or page number(s) and line number(s) where appropriate,

(B) the difference or differences in the claim over the applied reference(s),

(C) the proposed modification of the applied reference(s) necessary to arrive at the claimed subject matter, and

(D) an explanation why one of ordinary skill in the art, at the time the invention was made, would have been motivated to make the proposed modification.

The MPEP further states "To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. In re Vaack, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)."

The MPEP states that the initial burden is on the Examiner to provide some suggestion of the desirability of doing what the inventor has done and that to support the conclusion that

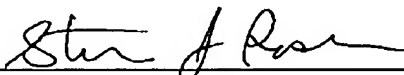
ATTY DOCKET NO.
133474

DOC. ID
133474C

the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the Examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references. The Examiner has failed to do so primarily because neither Dulaney or Ferrigno et al. teach that the use of a low fluence oblique laser beam that is oblique with respect to the surface nor a reason to do combine any two such references. Furthermore, neither Dulaney or Ferrigno et al. teach that the use of a oblique laser beam to produce a low fluence laser beam at the surface. Clearly, the Examiner used impermissible hindsight to make the combination for the 103 rejection.

Therefore, the Applicants respectfully submit that the remarks above overcome the Examiner's rejection of Claims 1-24 under 35 U.S.C. 103(a) as being unpatentable over W095/25821 to Dulaney in view of USPN 6,200,689 to Ferrigno et al., and that Claims 1-24 are now in condition for allowance.

Respectfully submitted,


Steven J. Rosen
Attorney for the Applicants
Reg. No. 29,972

September 11, 2006

4729 Cornell Rd.
Cincinnati, OH 45241

Phone: (513) 489-5383
FAX: (513) 489-5466